

SEQUENCE LISTING

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de Waal Malefyt, Rene
Liu, Yong-Jun
Soumelis, Vassili

<120> MAMMALIAN CYTOKINES; RELATED REAGENTS AND METHODS

<130> DX0903K1

<140> US 09/963,347
<141> 2001-09-25

<150> US 09/399,492
<151> 1999-09-20

<150> US 60/131,298
<151> 1999-04-27

<150> US 60/101,318
<151> 1998-09-21

<160> 9

<170> PatentIn version 3.1

<210> 1
<211> 468
<212> DNA
<213> Homo sapiens

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<222> (20)..(466)
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<221> mat_peptide
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<222> (301)..(301)
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agtgtgaaac tggggtgga atg ggg tgt cca cgt atg ttc cct ttt gcc tta
Met Gly Cys Pro Arg Met Phe Pro Phe Ala Leu
-30 -25

52

cta tat gtt ctg tca gtt tct ttc agg aaa atc ttc atc tta caa ctt
Leu Tyr Val Leu Ser Val Ser Phe Arg Lys Ile Phe Ile Leu Gln Leu
-20 -15 -10

100

gta ggg ctg gtg tta act tac gac ttc act aac tgt gac ttt gag aag
Val Gly Leu Val Leu Thr Tyr Asp Phe Thr Asn Cys Asp Phe Glu Lys

148

-5	-1 1	5	10	
att aaa gca gcc tat ctc agt act att tct aaa gac ctg att aca tat Ile Lys Ala Ala Tyr Leu Ser Thr Ile Ser Lys Asp Leu Ile Thr Tyr 15	20		25	196
atg agt ggg acc aaa agt acc gag ttc aac aac acc gtc tct tgt agc Met Ser Gly Thr Lys Ser Thr Glu Phe Asn Asn Thr Val Ser Cys Ser 30	35		40	244
aat cgg cca cat tgc ctt act gaa atc cag agc cta acc ttc aat ccc Asn Arg Pro His Cys Leu Thr Glu Ile Gln Ser Leu Thr Phe Asn Pro 45	50		55	292
aac cgc cgn gtg cggt tcg ctc gcc aaa gaa atg ttc gcc atg aaa act Asn Arg Arg Val Arg Ser Leu Ala Lys Glu Met Phe Ala Met Lys Thr 60	65		70	340
aag gct gcc tta gct atc tgg tgc cca ggc tat tcg gaa act cag ata Lys Ala Ala Leu Ala Ile Trp Cys Pro Gly Tyr Ser Glu Thr Gln Ile 75	80		85	90
aat gct act cag gca atg aag aag agg aga aaa agg aaa gtc aca acc Asn Ala Thr Gln Ala Met Lys Lys Arg Arg Lys Arg Lys Val Thr Thr 95	100		105	436
aat aaa tgt ctg gaa caa gtg tca caa tta aa Asn Lys Cys Leu Glu Gln Val Ser Gln Leu 110		115		468
 <210> 2				
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Met Gly Cys Pro Arg Met Phe Pro Phe Ala Leu Leu Tyr Val Leu Ser -30	-25		-20	
 Val Ser Phe Arg Lys Ile Phe Ile Leu Gln Leu Val Gly Leu Val Leu -15	-10		-5	
 Thr Tyr Asp Phe Thr Asn Cys Asp Phe Glu Lys Ile Lys Ala Ala Tyr -1 1	5	10	15	
 Leu Ser Thr Ile Ser Lys Asp Leu Ile Thr Tyr Met Ser Gly Thr Lys 20	25		30	
 Ser Thr Glu Phe Asn Asn Thr Val Ser Cys Ser Asn Arg Pro His Cys 35	40		45	
 Leu Thr Glu Ile Gln Ser Leu Thr Phe Asn Pro Asn Arg Arg Val Arg 50	55		60	

Ser Leu Ala Lys Glu Met Phe Ala Met Lys Thr Lys Ala Ala Leu Ala
65 70 75

Ile Trp Cys Pro Gly Tyr Ser Glu Thr Gln Ile Asn Ala Thr Gln Ala
80 85 90 95

Met Lys Lys Arg Arg Lys Arg Lys Val Thr Thr Asn Lys Cys Leu Glu
100 105 110

Gln Val Ser Gln Leu
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Met Phe Pro Phe Ala Leu Leu Tyr Val Leu Ser Val Ser Phe Arg Lys
-25 -20 -15

atc ttc atc tta caa ctt gta ggg ctg gtg tta act tac gac ttc act 96
Ile Phe Ile Leu Gln Leu Val Gly Leu Val Leu Thr Tyr Asp Phe Thr
-10 -5 -1 1

aac tgt gac ttt gag aag att aaa gca gcc tat ctc agt act att tct 144
Asn Cys Asp Phe Glu Lys Ile Lys Ala Ala Tyr Leu Ser Thr Ile Ser
5 10 15 20

aaa gac ctg att aca tat atg agt ggg acc aaa agt acc gag ttc aac 192
Lys Asp Leu Ile Thr Tyr Met Ser Gly Thr Lys Ser Thr Glu Phe Asn
25 30 35

aac acc gtc tct tgt agc aat cgg cca cat tgc ctt act gaa atc cag 240
Asn Thr Val Ser Cys Ser Asn Arg Pro His Cys Leu Thr Glu Ile Gln
40 45 50

agc cta acc ttc aat ccc acc gcc ggc tgc gcg tcg ctc gcc aaa gaa 288
Ser Leu Thr Phe Asn Pro Thr Ala Gly Cys Ala Ser Leu Ala Lys Glu
55 60 65

atg ttc gcc atg aaa act aag gct gcc tta gct atc tgg tgc cca ggc 336
Met Phe Ala Met Lys Thr Lys Ala Ala Leu Ala Ile Trp Cys Pro Gly

70

75

80

tat tcg gaa act cag ata aat gct act cag gca atg aag aag agg aga
 Tyr Ser Glu Thr Gln Ile Asn Ala Thr Gln Ala Met Lys Lys Arg Arg
 85 90 95 100

384

aaa agg aaa gtc aca acc aat aaa tgt ctg gaa caa gtg tca caa tta
 Lys Arg Lys Val Thr Thr Asn Lys Cys Leu Glu Gln Val Ser Gln Leu
 105 110 115

432

caa gga ttg tgg cgt cgc ttc aat cga cct tta ctg aaa caa cag taa
 Gln Gly Leu Trp Arg Arg Phe Asn Arg Pro Leu Leu Lys Gln Gln
 120 125 130

480

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 <213> Homo sapiens

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Met Phe Pro Phe Ala Leu Leu Tyr Val Leu Ser Val Ser Phe Arg Lys
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Ile Phe Ile Leu Gln Leu Val Gly Leu Val Leu Thr Tyr Asp Phe Thr
 -10 -5 -1 1

Asn Cys Asp Phe Glu Lys Ile Lys Ala Ala Tyr Leu Ser Thr Ile Ser
 5 10 15 20

Lys Asp Leu Ile Thr Tyr Met Ser Gly Thr Lys Ser Thr Glu Phe Asn
 25 30 35

Asn Thr Val Ser Cys Ser Asn Arg Pro His Cys Leu Thr Glu Ile Gln
 40 45 50

Ser Leu Thr Phe Asn Pro Thr Ala Gly Cys Ala Ser Leu Ala Lys Glu
 55 60 65

Met Phe Ala Met Lys Thr Lys Ala Ala Leu Ala Ile Trp Cys Pro Gly
 70 75 80

Tyr Ser Glu Thr Gln Ile Asn Ala Thr Gln Ala Met Lys Lys Arg Arg
 85 90 95 100

Lys Arg Lys Val Thr Thr Asn Lys Cys Leu Glu Gln Val Ser Gln Leu
 105 110 115

Gln Gly Leu Trp Arg Arg Phe Asn Arg Pro Leu Leu Lys Gln Gln
 120 125 130

<210> 5
<211> 176
<212> PRT
<213> ovine

<400> 5

Met Phe His Val Ser Phe Arg Tyr Ile Phe Gly Ile Pro Pro Leu Ile
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Leu Val Leu Leu Pro Val Ala Ser Ser Asp Cys Asp Phe Ser Gly Lys
20 25 30

Asp Gly Gly Ala Tyr Gln Asn Val Leu Met Val Ser Ile Asp Asp Leu
35 40 45

Asp Asn Met Ile Asn Phe Asp Ser Asn Cys Leu Asn Asn Glu Pro Asn
50 55 60

Phe Phe Lys Lys His Ser Cys Asp Asp Asn Lys Glu Ala Ser Phe Leu
65 70 75 80

Asn Arg Ala Ala Arg Lys Leu Lys Gln Phe Leu Lys Met Asn Ile Ser
85 90 95

Asp Asp Phe Lys Leu His Leu Ser Thr Val Ser Gln Gly Thr Leu Thr
100 105 110

Leu Leu Asn Cys Thr Ser Lys Gly Lys Gly Arg Lys Pro Pro Ser Leu
115 120 125

Gly Glu Ala Gln Pro Thr Lys Asn Leu Glu Glu Asn Lys Ser Leu Lys
130 135 140

Glu Gln Arg Lys Gln Asn Asp Leu Cys Phe Leu Lys Ile Leu Leu Gln
145 150 155 160

Lys Ile Lys Thr Cys Trp Asn Lys Ile Leu Arg Gly Ile Thr Glu His
165 170 175

<210> 6
<211> 176
<212> PRT
<213> bovine

<400> 6

Met Phe His Val Ser Phe Arg Tyr Ile Phe Gly Ile Pro Pro Leu Ile
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Leu Val Leu Leu Pro Val Ala Ser Ser Asp Cys Asp Ile Ser Gly Lys
20 25 30

Asp Gly Gly Ala Tyr Gln Asn Val Leu Met Val Asn Ile Asp Asp Leu
35 40 45

Asp Asn Met Ile Asn Phe Asp Ser Asn Cys Leu Asn Asn Glu Pro Asn
50 55 60

Phe Phe Lys Lys His Ser Cys Asp Asp Asn Lys Glu Ala Ser Phe Leu
65 70 75 80

Asn Arg Ala Ser Arg Lys Leu Arg Gln Phe Leu Lys Met Asn Ile Ser
85 90 95

Asp Asp Phe Lys Leu His Leu Ser Thr Val Ser Gln Gly Thr Leu Thr
100 105 110

Leu Leu Asn Cys Thr Ser Lys Gly Lys Gly Arg Lys Pro Pro Ser Leu
115 120 125

Ser Glu Ala Gln Pro Thr Lys Asn Leu Glu Glu Asn Lys Ser Ser Lys
130 135 140

Glu Gln Lys Lys Gln Asn Asp Leu Cys Phe Leu Lys Ile Leu Leu Gln
145 150 155 160

Lys Ile Lys Thr Cys Trp Asn Lys Ile Leu Arg Gly Ile Lys Glu His
165 170 175

<210> 7
<211> 177
<212> PRT
<213> Homo sapiens

<400> 7

Met Phe His Val Ser Phe Arg Tyr Ile Phe Gly Leu Pro Pro Leu Ile
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Leu Val Leu Leu Pro Val Ala Ser Ser Asp Cys Asp Ile Glu Gly Lys
20 25 30

Asp Gly Lys Gln Tyr Glu Ser Val Leu Met Val Ser Ile Asp Gln Leu
35 40 45

Leu Asp Ser Met Lys Glu Ile Gly Ser Asn Cys Leu Asn Asn Glu Phe
50 55 60

Asn Phe Phe Lys Arg His Ile Cys Asp Ala Asn Lys Glu Gly Met Phe
65 70 75 80

Leu Phe Arg Ala Ala Arg Lys Leu Arg Gln Phe Leu Lys Met Asn Ser
85 90 95

Thr Gly Asp Phe Asp Leu His Ile Leu Lys Val Ser Glu Gly Thr Thr
100 105 110

Ile Leu Leu Asn Cys Thr Gly Gln Val Lys Gly Arg Lys Pro Ala Ala
115 120 125

Leu Gly Glu Ala Gln Pro Thr Lys Ser Leu Glu Glu Asn Lys Ser Leu
130 135 140

Lys Glu Gln Lys Lys Leu Asn Asp Leu Cys Phe Leu Lys Arg Leu Leu
145 150 155 160

Gln Glu Ile Lys Thr Cys Trp Asn Lys Ile Leu Met Gly Thr Lys Glu
165 170 175

His

<210> 8
<211> 154
<212> PRT
<213> Mus musculus

<400> 8

Met Phe His Val Ser Phe Arg Tyr Ile Phe Gly Ile Pro Pro Leu Ile
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Leu Val Leu Leu Pro Val Thr Ser Ser Glu Cys His Ile Lys Asp Lys
20 25 30

Glu Gly Lys Ala Tyr Glu Ser Val Leu Met Ile Ser Ile Asp Glu Leu
35 40 45

Asp Lys Met Thr Gly Thr Asp Ser Asn Cys Pro Asn Asn Glu Pro Asn
50 55 60

Phe Phe Arg Lys His Val Cys Asp Asp Thr Lys Glu Ala Ala Phe Leu
65 70 75 80

Asn Arg Ala Ala Arg Lys Leu Lys Gln Phe Leu Lys Met Asn Ile Ser
85 90 95

Glu Glu Phe Asn Val His Leu Leu Thr Val Ser Gln Gly Thr Gln Thr
100 105 110

Leu Val Asn Cys Thr Ser Lys Glu Glu Lys Asn Val Lys Glu Gln Lys
115 120 125

Lys Asn Asp Ala Cys Phe Leu Lys Arg Leu Leu Arg Glu Ile Lys Thr
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Cys Trp Asn Lys Ile Leu Lys Gly Ser Ile
145 150

<210> 9

<211> 154

<212> PRT

<213> Mus musculus

<400> 9

Met Phe His Val Ser Phe Arg Tyr Ile Phe Gly Ile Pro Pro Leu Ile
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20 25 30

Asp Gly Lys Ala Phe Gly Ser Val Leu Met Ile Ser Ile Asn Gln Leu
35 40 45

Asp Lys Met Thr Gly Thr Asp Ser Asp Cys Pro Asn Asn Glu Pro Asn
50 55 60

Phe Phe Lys Lys His Leu Cys Asp Asp Thr Lys Glu Ala Ala Phe Leu
65 70 75 80

Asn Arg Ala Ala Arg Lys Leu Arg Gln Phe Leu Lys Met Asn Ile Ser
85 90 95

Glu Glu Phe Asn Asp His Leu Leu Arg Val Ser Asp Gly Thr Gln Thr
100 105 110

Leu Val Asn Cys Thr Ser Lys Glu Glu Lys Thr Ile Lys Glu Gln Lys
115 120 125

Lys Asn Asp Pro Cys Phe Leu Lys Arg Leu Leu Arg Glu Ile Lys Thr
130 135 140

Cys Trp Asn Lys Ile Leu Lys Gly Ser Ile
145 150